

SECTION 1

INTRODUCTION AND GENERAL DESCRIPTION OF PLANT

1.1 PROJECT IDENTIFICATION

This Updated Final Safety Analysis Report is submitted pursuant to the requirements of 10CFR50.71 by Public Service Electric and Gas Company (PSE&G) for the two nuclear power units at its Salem Generating Station.

PSE&G and Westinghouse Electric Corporation have jointly participated in the design and construction of each unit. On August 21, 2000, the operating licenses for Salem Units 1 & 2 were transferred from PSE&G to PSEG Nuclear LLC. Each unit employs a pressurized water reactor nuclear steam supply system furnished by Westinghouse which is similar in design concept to several other projects licensed by the Nuclear Regulatory Commission. The only systems shared by the two units are Compressed Air, the Control Room Area intake air radiation monitors, parts of the Control Room Area Ventilation System, bulk Nitrogen Supply, Demineralized Water, and the Solid Radwaste Handling System. There are a minimum of shared components; chemical drain and laundry hot shower tanks and pumps and the 20,000 barrel Bulk Fuel Oil Storage Tank are the only components in common.

The licensed core power for both units is 3459 MWt. The approximate values for gross and net electrical outputs are 1178 MWe and 1135 MWe respectively for Unit 1 and 1182 MWe and 1139 MWe respectively for Unit 2. The reactors are expected to be capable of outputs of approximately 3570 MWt, which corresponds to the valves-wide-open rating of the turbine generators of 1209 MWe gross and 1163 MWe net for Unit 1 and 1220 MWe gross and 1174 MWe net for Unit 2. The containment and engineered safety features for both units have been designed and evaluated at the maximum power rating of 3570 MWt. Loss-of-coolant accidents and those postulated accidents having offsite dose consequences have been analyzed at the power rating of 3570 MWt.

The remainder of Section 1 of this report summarizes the principal design features and safety criteria of the nuclear units, pointing out the similarities and differences with respect to other pressurized water nuclear power plants employing the same technology and basic engineering features as the Salem Generating Station.

Section 2 contains a description and evaluation of the site and environs, supporting the suitability of the site for a nuclear plant of the size and type described. Section 3 discusses the identification, description, and discussion of the principal architectural and engineering design of structures, components, equipment, and systems important to safety. The reactor is described in Section 4. Section 5 discusses the Reactor Coolant System and related systems, and Sections 6 through 11 the emergency and auxiliary systems.

Section 13 describes the Company's program for organization and training of plant personnel. Section 14 contains an outline and description of the initial tests and operations associated with plant startup.

Section 15 is a safety evaluation summarizing the analyses which demonstrate the adequacy of the Reactor Protection System, and the engineered safety features. The consequences of various postulated accidents are within the guidelines set forth in the Nuclear Regulatory Commission's Rules and Regulations and 10CFR50.67, Accident Source Term.